A SYSTEM AND METHOD FOR PERFORMING SECURE
USER ACCOUNT PURCHASES

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BACKGROUND OF THE INVENTION

Claim of Priority

The present application is a continuation-in-part application of previously filed, now pending application having Serial No. 09/231,745, filed on January 15, 1999.

Field of the Invention

This invention relates to a system and method of performing secure purchases using a pre-established user account, such as a debit account, a credit account, an ATM type account, a checking account, etc., collectively referred to herein for reasons of clarity as credit card purchases due to the typical credit card type account processing techniques usually employed whether the account is a debit, savings, checking, ATM, or credit account. The secure purchases may be made in connection with remote and local commercial transactions, in a manner that is seamless and verifiable to a merchant already capable of processing normal credit card transactions, whether with or without a PIN entry, but keeps the customers account information secure by not requiring any disclosure whatsoever of their established account number. Specifically, in the system of the present invention, an account holder does not have to reveal their established account number to a merchant or a mechanism controlled by the merchant in order to accomplish a purchase,

and does not need a specialized, contemporaneous communicative link with a custodial authority, such as an issuing entity, at the time of making the transaction, but also ensures to the merchant the necessary account verifications and approvals prior to authorizing and/or completing the transaction in a manner that does not require a specialized computer interface or setup beyond what is already in place to process conventional credit card transactions. As a result, overall security is increased by minimizing access to account numbers without having to modify or deviate from existing, accepted account transaction practices.

Description of the Related Art

The utilization of credit based and debit based cards, such as pure credit cards, check cashing or ATM cards, all collectively and interchangeably referred to for purposes of clarity as credit cards, wherein a user has a pre-established account, to conduct transactions is ever increasing. This is especially the case with remote or "mail-order" transactions wherein merchants desire to be assured of a payment prior to shipping a product, as well as "in person" transactions at stores, restaurants, etc. wherein an individual does not have large amounts of cash. Furthermore, with regard to remote transactions, recent years have seen a substantial increase in the popularity of televised shopping networks to further supplement the popularity of catalogue type sales, and the increasing use and popularity of distributed computer networks

1 such as the Internet has also contributed to the dramatic

2 increase in the number of remote commercial transactions

3 conducted every day.

4 One primary reason associated with the rapid growth of

5 remote commercial transactions is the ability of a merchant to

6 reach an almost limitless number of potential customers at a

7 substantially insignificant cost and with little or no operating

8 overhead since an actual store is not required. Additionally,

9 such sales techniques permit customers to view the products and

10 services in a greatly expanded marketplace, representing a great

11 number of vendors, without extensive travel and without

12 foregoing the privacy and convenience of their home or other

13 predetermined computer site in some cases. Simply put, a

14 telephone or like communication avenue is all that is needed to

15 place the consumer in contact with the merchant and complete the

16 transaction.

17 The vast increase in popularity of user account

18 transactions, and especially, remote commercial transactions

19 conducted over the telephone or internet using a credit card is

20 further facilitated by the relatively simple protocols and

21 procedures necessary to conduct and complete such transactions.

22 In particular, in order to complete a valid transaction, a

23 merchant need not even physically see the customer or the credit

24 card, but must merely accept and enter a customer's account

25 number and an expiration date thereof to obtain authorization.

26 This same convenience, however, is one of the primary

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disadvantages and/or problems associated with conducting commerce in the manners set forth above. Specifically, there is a great reluctance on the part of the customer to transmit their account information because of the proliferation of fraud, and a well recognized lack of security directed to the protection of such account information. Indeed, it has been established that security and privacy concerns are realistic due to the fact that account data is easily readable or interceptable by unauthorized parties, and can be readily used for all types of fraudulent remote transactions with minimal risk of being physically caught. In fact, unscrupulous individuals have many ways of gaining access to a consumer's legitimate transaction details and thereby obtaining the account information. Moreover, in addition to more "high-tech" methods of intercepting or obtaining the information, often the information can be simply obtained from old credit card receipts or even from the unauthorized notation and use of the information by merchants or their employees after a legitimate transaction is made. As a result, substantial risks are present whenever or however an account transaction is made. Furthermore, these possible threats can be rather difficult to prevent utilizing known methods and systems unless a consumer is willing to completely forego the use of a credit card for purchases.

.In the case of computerized remote transactions, as messages, including account data or other confidential information, move across the Internet, they can easily pass

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through numerous computers, any one of which can be utilized to copy such confidential information or data, thereby leading to a further risk of potential fraud when conducting such transactions. Presently, some companies currently seek to address such security and privacy concerns by the employment of encryption programs and techniques. To this end there is an extensive facility associated with both public and private encryption schemes being deployed in order to guard the private or secured information being transmitted across the internet or like world wide networks. Unfortunately, however, even with such encryption techniques, the account information must usually still ultimately be transmitted to a third party who did not previously have access to that information. Even some more sophisticated systems which seek to interpose a separate computer or encryption entity between the consumer and the merchant so as to obtain authorization and forward it to the merchant, that information must still be made available to and/or transmitted to that third party, thereby leaving open an avenue for fraud or theft. Further, such encryption techniques, even if minimally effective for computerized remote transactions, are not truly useable for other conventional types of remote transactions, or even normal in person transactions.

Based on the above, there is a need in the field of art associated with commercial transactions for a system and method of performing secure purchases of goods and services which truly reduces the risk of potential fraud and theft by eliminating

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1   outside access to a consumer's private account information

2   without requiring complex encryption equipment or significantly

3   altering the ease and convenience of current transaction

4   techniques.   Further, such a system and method should also be

5   effective for use in conventional, "in person" transactions as

6   well, thereby providing an added measure of security and

7   minimizing the hazards associated with the passing on of account

8   information by unscrupulous merchants.   Also, such a system

9   should provide limits to potential loss or liability in a manner

10   which does not impede the transaction.

11   It also bears noting that some systems have been developed

12   wherein a simultaneous link is established between a consumer,

13   an account issuing entity and a merchant so as to achieve more

14   secure account verification.   Such systems, however, require a

15   substantial deviation and/or departure from existing account

16   verification techniques already used in virtually every

17   commercial establishment.   As a result, the increase costs

18   associated with implementation can make such systems un-

19   practical unless it is for an Internet transaction wherein

20   sophisticated computer processors are employed.   As such, it

21   would be very beneficial to provide a secure system that does

22   not require merchants to alter their established account

23   verification techniques, but which could be implemented and/or

24   offered by an account issuing entity for effective and

25   convenient use by consumers desiring added security.

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Summary of the Invention

The present invention is directed towards a system and method of performing secure purchases using an established user account, wherein payment for goods or services purchased is efficiently accomplished while eliminating the necessity of disclosure or dissemination of a consumers specific account number or other account identification data which the customer or other individual may wish to maintain in confidence and which may allow extensive amounts of transactions. The system and method of the present invention incorporates the advantage of consummating the purchase by the customer through the pre-selection of any one of a plurality of predetermined payment categories. Collectively, the payment categories represent a variety of methods for accomplishing payment for a fixed transaction, multiple transactions and/or a repeating transaction.

One embodiment of the system and method of the present invention comprises a customer receiving information, either as a result of a solicitation or request, including specific data necessary for the purchase of any given product or service. This product information generated by the merchant can be received by any of a plurality of conventional means including advertisements, catalogues, computer network connections, direct person to person customer and merchant contact, telephone solicitation, mail orders, etc. Once the customer has identified the product or services which he/she wishes to

purchase, and/or in anticipation of a purchase, the customer independently and directly contacts and supplies to a custodial authorizing entity, requisite information concerning both the identification of a specific user account, such as a credit or debit account, and a requested payment category. Additionally, security against unauthorized use of confidential account data may also include information relating to the merchant's identification and/or location.

The custodial authorizing entity is preferably defined as the entity which has or has been assigned the custodial responsibility for the financial account data of a customer's established account, including a previous knowledge of the account number and other information such as credit limits, payment history, available credit amounts, account balances, and other information which will determine the status of a given user account in terms of continuously authorizing a requested payment for a current purchase.

As part of the security system for accomplishing a commercial transaction utilizing credit or debit payment, the custodial authorizing entity includes sufficient facilities, preferably including a processing computer or like applicable hardware for the generation of an exclusive transaction code. The transaction code is to be used in substitution for the account number normally provide in connection with a transaction, and when utilized as authorized, will issue the merchant a credit approval, and will accomplish payment for the

goods or services desired in the normal fashion normally associated with a credit or debit transaction, without the publication or dissemination of an identifying information for a specific customer's established and continuing account to any entity that is not already aware of that information. In particular, the customer's established account, which remains in effect and will continue to be used in connection with all transactions affiliated with the custodial authorizing entity remains protected and need not be disclosed, thus not compromising its future use.

Further, a feature of the transaction code is its ability to indicate any one of preferably a plurality of predetermined payment categories which may be either requested by the customer or automatically chosen by the custodial authorizing entity based on the type of account or the type of purchase or other commercial transaction involved. Each of the payment categories are reflective of a different type of payment desired or required to consummate the intended purchase. More specifically, the plurality of payment categories may include a single transaction involving a specific dollar amount for a purchase within a specific time period, such as twenty four hours, during which authorization of the purchase remains valid. Alternately, a single transaction may be involved wherein a maximum limit, pre-set range, or a specific dollar amount is determined, purchases falling outside those parameters being invalid, and further wherein a fixed period of time is

preferably established for maintaining authorization of such purchase. Other alternatives would involve one or more of the categories coded to define multiple transactions involving a maximum dollar amount for purchases, as well as a fixed period of time for authorization of such purchases, and/or a repeating transaction wherein payments may be automatically accessed by a merchant over a predetermined or unspecified time interval (such as every thirty days) for a specific dollar amount or a maximum dollar amount limit. Also, limits solely as to a specific merchant or a given time period can be effectively established for which the transaction code is valid.

A further feature of the present invention to be described in greater details hereinafter, is that the transaction code is preferably received directly by the customer and is transmitted to the merchant by the customer or a person specifically authorized by the customer. Only minimal contact by the merchant and the custodial authorizing entity is provided for purposes of the merchant verifying the validity of the transaction code, said contact typically being achieved utilizing conventional processes such as those already used for the verification of a credit card number normally offered to a merchant for the purchase of goods or services. There is, therefore, no disclosure, publication or other dissemination of the specific account number for a given customer beyond those entities who already know the information, and the transaction code is transmitted exclusively to the customer by the custodial

authorizing entity who has the ability to better identify whether the customer is properly authorized to use the account. Moreover, the transaction code, once given out by the customer, only has a limited usefulness, thereby limiting the risk of misuse and minimizing the potential losses to be experienced by the credit card company and/or the account holder, but does not require merchants to alter or modify their existing authorization techniques.

These and other features and advantages of the present invention will become more clear when the drawings as well as the detailed description are taken into consideration.

Brief Description of the Drawings

For a fuller understanding of the nature of the present invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

Figure 1 is a schematic representation of a flow chart showing various steps involved in the performance of the system and method of the present invention for the secure credit card purchasing;

Figure 2 is a schematic representation similar to that of Figure 1 wherein customer to merchant contact is accomplished by conventional facilities such as television; and

Figure 3 is a schematic representation similar that of Figure 2 wherein customer to merchant contact is established

1   either by phone or in person.

2   Like reference numerals refer to like parts throughout the

3   several views of the drawings.

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5   <u>Detailed Description of the Preferred Embodiment</u>

6   As shown in the accompanying Figures, the present invention

7   is directed towards a system and method for accomplishing secure

8   purchases utilizing an established user account, such as a

9   checking, credit, debit, ATM type account, collectively referred

10   to as a credit card type purchases. Moreover, these purchases

11   can be "in person", but often may include remote commercial

12   transactions such as mail order, purchases over the Internet,

13   telephone solicitations, etc. Security is establish by virtue

14   of the elimination of the need to disclose an active account

15   number and expiration date to the merchant or any other party

16   other than the original credit card company, issuing bank or

17   like   financial   institution   which   already   has   custodial

18   responsibilities for the financial or account data associated

19   with a given customer's account.

20   More specifically and with reference to Figure 1 the system

21   as well as an attendant method is preferably instigated by the

22   customer viewing or anticipating the viewing of a product,

23   identifying a desired amount for a transaction and/or receiving

24   promotional information as at 10, either in person or by any of

25   the electronic or more conventional techniques which will be

26   described in greater detail with reference to Figures 2 through

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3.   Once the customer reviews the product or promotional information and/or has what they determine to be sufficient information, such as including price, product or service identification, payment requirement, etc., regarding the remote commercial transaction to be conducted, the customer contacts, either by computer, telephone or in person, a custodial authorizing entity as at 12. The custodial authorizing entity may herein be defined as comprising that entity or institution which has or has been designated by the entity which has custodial responsibility for the financial data and security of a given account of a customer. As set forth above such custodial authorizing entity can be represented by the credit card company issuing a credit card to a given customer or alternately can be represented by a bank or other financial institution serving to sponsor a credit card or debit card to the extent of processing the debits and credit associated therewith. The authorizing entity's custodial responsibilities of course includes the previous knowledge and/or storage of the account number, such as the credit card number, serving to identify a specific customer's account. Once contacted, the customer then supplies appropriate identification data to inform the custodial authorizing entity of a specific customer's account as at 14. In addition, the customer will supply the custodial authorizing entity with additional required information needed to consummate the purchase as well as ensure the security of the account in order to prevent its unauthorized

1 use. Such additional information may also include the

2 identification of the merchant or merchants involved, when such

3 information is deemed necessary, and the selection and

4 definition of a requested one of a plurality of predetermined

5 payment categories to facilitate consummation of the purchase of

6 the products or services desired. Such predetermined plurality

7 of payment categories will be discussed in greater detail

8 hereinafter.

9   Once the appropriate information has been received from the

10 customer as indicated at 16, the custodial authorizing entity

11 verifies the credit card status and account identification of

12 the customer to determine the viability of the account in terms

13 of dollar amount limits, payment history, available credit

14 balance, etc. If the accessed credit card account is not in

15 good standing, the custodial authorizing entity will permanently

16 or temporarily terminate the transaction as at 18 and/or

17 communicate to the customer directly as at 18' by any applicable

18 means for purposes of informing the customer of the unacceptable

19 status of the accessed credit card account. If the account is

20 in good standing, based at least in part on the requested

21 payment category, (such as amount of payment), the custodial

22 authorizing entity generates a transaction code as at 20. The

23 transaction code is preferably a temporary or disposable code

24 that is used in substitution for the specific account number

25 which would normally identify a customer's account to a

26 merchant and would allow at least some access to charges thereon

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by any entity having possession of the account number whether or not such possession was authorized or unauthorized.   More specifically, the transaction code is pre-coded to be indicative of a specific account, possibly a merchant or merchants identification and/or another designated payment category, preferably selected from a plurality of predetermined payment categories.   Once generated, the transaction code is communicated exclusively to the authorized and verified customer by the custodial authorizing entity as at 22, wherein the system and method of the present invention preferably restricts communication between the custodial authorizing entity and the merchant except to conduct a normal verification as will be explained.   In this regard, it is noted that the transaction code may be audibly communicated to the user, and/or may be printed on a single or infrequent use paper or card. Furthermore, pre-printed cards bearing transaction codes may be provided to a customer, the contact with the custodial entity activating the transaction code and specifying its characteristics.   As a result, even if lost or stolen, a pre-printed transaction code has no use or value unless activated, and then only within the defined payment category parameters.

The verified customer thereafter and preferably within a time limit to be determined by the customer in connection with the payment category and pre-coded in association with the transaction code, will directly or through an authorized representative communicate the transaction code to the merchant

as at 24. The system and method of the preferred embodiment of the present invention contemplates that only the verified customer will transmit the generated transaction code to the merchant in the case of a remote commercial transaction, thereby limiting knowledge of the transaction code to those parties having a need to know. Of course, however, as the transaction code will generally have a limited value as defied by the verified customer when obtained, the verified customer may designate an agent or other entity to act as the customer on his/her behalf, with the amount of potential liability to be experienced by such a transaction to be limited to the amount defined by the verified customer when obtaining the transaction code and/or to certain types of transactions.

At this point the purchase is consummated at least from the customer standpoint in that the customer has previously established the acceptable status of the account. Therefore the customer feels free to disclose the transaction code to the merchant or merchants instead of the actual account number as at 22, 24 and is relatively unconcerned if the transaction code is published or otherwise disseminated to unauthorized entities after use. In a preferred embodiment wherein a merchant identifier is pre-coded in association with the transaction code, the pre-coding of the transaction code will prohibit an unauthorized use due at least in part to the fact that the merchant is specifically identified and any attempt to use the transaction code other than by the identified merchant will be

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prohibited. In addition, the merchant is prevented from "overcharging" or "extending" the purchase by fixing the dollar amount to satisfy the specific cost or limit of the purchase as well as a specific time limit or time parameters in which the authorization for payment is valid. Such information, as set forth above, is communicated by the requested and subsequently designated payment category as set forth above. Restricted communication between the merchant and the custodial authorizing entity as at 26 is permitted exclusively for purposes of verification of the transaction code in a manner, which may preferably utilize, at least to some extent, conventional facilities for the verification of a credit card number by most merchants or like commercial establishments. As a result, the merchant has appropriate verification as to the validity of a transaction and can effectively make arrangements to be paid by the account provider in the normal course of business, without requiring additional specialized facilities beyond what they already have in order to accept these types of transactions.

If for some reason the transaction code is refused verification, the customer may be informed directly by the merchant as at 28 and/or the transaction may be terminated as at 30 as would be the case with a refused credit card. Assuming verification of the transaction code by the custodial authorizing entity, however, the merchant proceeds to consummate the purchase and send the order, as at 32, in the case of a remote commercial transaction.

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1   Figures 3 and 4 are representative of the versatility of

2   the system and method of the present invention wherein the

3   customer 54 may receive the aforementioned promotional

4   information from the merchant 56 by any appropriate means such

5   as television solicitation as at 58, phone solicitation as at 60

6   and/or personal solicitation as at 62. Once the customer

7   receives the promotional information, which may include the

8   viewing of the product itself, or in advance if a general

9   estimate as to the ultimate cost of an anticipated purchase(s)

10   can be made prior to viewing promotional information, the

11   customer contacts the custodial authorizing entity 64 by any

12   appropriate electronic or conventional facilities such as direct

13   phone to phone contact as at 66 and 66' or direct computer

14   contact as at 42', 45'. Once the customer's authorization is

15   confirmed, details of the anticipated transaction are

16   established so as to determine a payment category, and the a

17   transaction code is issued to the customer. The customer,

18   either directly or through a representative, can then utilize

19   the transaction code to consummate a transaction within the

20   defined parameters of the payment category. Moreover, the

21   merchant 56, through a conventional, yet restricted

22   communication with the custodial authorizing entity 64 by any of

23   a plurality of conventional or electronic methods using computer

24   to computer linking as at 44', 45' or by telephone transmission

25   as at 56', 66', can obtain a verification and subsequent payment

26   utilizing the transaction code only.

As emphasized above, an important feature of the present invention is the ability of the customer to request a desired or a required payment category and the ability of the custodial authorizing entity 64 and/or a processing computer 45 of the custodial authorizing entity to issue a transaction code in accordance with the payment category. The payment categories, may be collectively defined as a variety of different types of transactions. Such transactions may include a single transaction for a specific amount of a purchase to be consummated. Alternatively, the payment category may include a single transaction defined by a single purchase having a maximum limit or range limit amount, wherein the specific or precise cost of the purchase has not been determined for a variety of reasons, and as such, the customer desires to set a maximum amount or a range for which the single transaction may be made. Accordingly, with such a payment category, the exact amount may not be known in advance, but the customer is assured of not paying over the specifically designated maximum limit. In addition, the transactions are preferably, but not necessarily, authorized to be conducted only over a fixed period of time, such as within twenty four hours, thereby ensuring that an outstanding transaction code does not remain valid if not used as generally intended. This limited time period can, of course be varied or omitted depending upon the wishes of the customer and/or the policies of the custodial authorizing entity. Also, these or any other payment category transactions may include a

specific merchant identification to further restrict use of the transaction code.

The payment category may also include a multi-transaction authorization wherein more than one purchase may be made from one or a plurality of different merchants, each of which may or may not be identified by the customer and pre-coded in association with the transaction code, and wherein a total cost of the plurality of purchases may not exceed a maximum limit amount. This transaction can also be limited to having to take place within a predetermined, designated fixed life span, such as but not limited to twenty four hours. Accordingly, in some instances wherein a customer, or an agent of the customer, such as a child, guardian, or care giver, must make a number of transactions or purchases which are authorized by the customer, the customer may designate a maximum amount which can be spent utilizing a particular transaction code within a predetermined period of time, and/or can designate that only one merchant, whether designated or not, can use the transaction code, and/or may designate that a plurality of transactions can be made so long as each is below a predetermined amount or to a predetermined merchant.

As yet another alternative, the payment category may include a repeating transaction for a specific amount to be paid in each of a fixed number of intervals. For example, the customer may which to join a gym or receive services or products over a fixed number of payment intervals, such as every thirty

1   days. Accordingly, the merchant will be authorized to charge

2   the account designated by the corresponding transaction code a

3   fixed monthly payment. Similarly, a repeating transaction for

4   a stated minimum interval such as every thirty days may be

5   authorized for a specific amount for an unspecified number of

6   intervals wherein the merchant will be authorized to

7   continuously obtain payment on a "monthly" basis until the

8   customer decides to cancel such authorization.

9   Since many modifications, variations and changes in detail

10   can be made to the described preferred embodiment of the

11   invention, it is intended that all matters in the foregoing

12   description and shown in the accompanying drawings be

13   interpreted as illustrative and not in a limiting sense. Thus,

14   the scope of the invention should be determined by the appended

15   claims and their legal equivalents.

16   Now that the invention has been described,